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ABSTRACT

In the spring of 1998, the Master's program in Classroom Technology at Bowling Green State University (Ohio) was granted conditional approval to grant, as part of the program, the new State of Ohio Department of Education computer/technology endorsement. This paper briefly describes Ohio's change from certification to licensure, the removal of relevant previous certificates (e.g., computer science), and the licensure/endorsement model. Further, the specifics of the computer/technology endorsement as covered in the Classroom Technology Master's program are described, as well as the process of moving from conditional to full approval (which is expected in the winter of 1999). Lastly, the recent OhioSchoolNet (a separate state agency) program of awarding novice, practitioner, and scholar technology certificates to teachers is explained in relation to the state computer/technology endorsement. (Author/AEF)

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Implementing a Computer/Technology Endorsement in a Classroom Technology Master's Program

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Abstract: In the spring of 1998, the Master's program in Classroom Technology at Bowling Green State University was granted conditional approval to grant, as part of the program, the new State of Ohio Department of Education computer/technology endorsement. This paper briefly describes Ohio's change from certification to licensure, the removal of relevant previous certificates(e.g., computer science), and the licensure/endorsement model. Further, the specifics of the computer/technology endorsement as covered in the Classroom Technology Master's program, are covered, as well as the process of moving from conditional to full approval(which is expected in the winter of 1999). Lastly, the recent OhioSchoolNet (a separate state agency) program of awarding novice, practitioner and scholar technology certificates to teachers is explained in relation to the state computer/technology endorsement.

Introduction

Through early national reports and studies (Gardner, 1983; Martinez & Mead, 1988) as well as a realization that technology is an empowering force in modern society and therefore a necessary component of the schooling experience (Marshall & Bannon; 1988,Naron & Estes, 1986; Gilder, 1993), the importance of technology in schooling has been well established. As a component of this interest in technology and learning, organizations such as the Society for Information Technology and Teacher Education (SITE), and the International Society for Technology in Education (ISTE) began, in the decade of the 90's, to establish formal means for preparing both inservice and preservice teachers to use technology with students. An outgrowth of this interest was, for teachers, a set of national guidelines in computer education developed by the International Society for Technology in Education and adopted by the National Council for Accreditation of Teacher Education(NCATE), (ISTE, 1992; NCATE, 1992; Thomas, 1993). As could be expected, these guidelines have become part of both preservice and inservice programs in teacher education (Brownell &Brownell, 1998; Brownell, Haney & Sternberg, 1997; Handler & Strudler, 1997; Strudler, Handler, & Falba, 1998) and have helped to spur relevant endorsements to teacher's licenses and certificates at the state level (Ohio Department of Education, 1996). This paper presents a brief overview of the implementation of the State of Ohio Department of Education computer/technology endorsement within a Master's program in Classroom Technology at Bowling Green State University.

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The Program

The Master of Education program in ClassroomTechnology (described in more detail in Brownell, Haney & Sternberg, 1997)is based upon the ISTE standards (ISTE, 1992; NCATE, 1992). The programcomprises 33 semester hours and is designed for the working professional to take over a 26 month period.Participants take courses over fall and spring semesters, as well as oversummers, in a prescribed sequence. A list of courses in the program,presented in the currently prescribed sequence, follows.

EDCI631 Survey of Computers in Education (3)
EDCI611 The Curriculum (3)
EDCI633 Hypermedia for Educators I (3)
EDCI634 Hypermedia for Educators II (3)
EDCI635 Classroom Technology, Problem Solving, and the Curriculum (3)
EDCI636 Networks for Learning (3)
EDCI632 Classroom Technology Planning in Education (3)
EDFI641 Statistics in Education (3)
EDFI642 Research in Education (3)
EDCI637 Distance Learning and Education (3)
EDCI638 Seminar on Classroom Technology and Learning (3)

Originally, the program was designed so that there were seven required core courses and four suggested courses, as follows.

Required core:

EDCI 631Survey of Computers in Education (3)
EDCI632 Classroom Technology Planning in Education (3)
EDCI633 Hypermedia for Educators I (3)
EDCI611 The Curriculum (3)
EDFI641 Statistics in Education (3)
EDFI642 Research in Education (3)
EDCI638 Seminar on Classroom Technology and Learning (3)

Suggested:

EDCI 634 Hypermedia forEducators II (3)
EDCI635 Classroom Technology, Problem Solving, and the Curriculum (3)
EDCI636 Networks for Learning(3)
EDCI637 Distance Learning andEducation (3)

In this design, students wereallowed to substitute approved electives for up to all four of thesuggested courses. This option will still be available to students in theprogram who elect to not gain the computer/technology endorsement, but willnot be an option, as explained below, for students seekingthe endorsement.

From Certification to Licensure

In 1997, Ohio changed from a state whichoffered the standard elementary, secondary, etc., certification to it'steachers to a state which now offers a teaching license in one of threeareas: early childhood, middle childhood, and adolescence to young adult. It is beyond the scope of this paper to discussthe particulars of this change other than to note two pertinent points.First, in doing so, the Ohio State Department of Education did away withthe previous computer science certification (which required, essentially, a bachelor's degree in computerscience plus relevant education course work, methods experiences, andstudent teaching); and second, a computer/technology endorsement wascreated.

Presently, as far as we have been able todetermine through the state, there are no plans for a computer scienceendorsement to replace the withdrawn computer science certificate. Itshould be noted, however, that the state is currently investigating this (possible) oversight with an eye towards takingcorrective action in the future.

The Computer/Technology Endorsement

The computer/technology endorsement is basedon the ISTE Standards. The endorsement is granted to an applicant whoholds a valid Ohio teacher certificate or license at the grade level forwhich the certificate or license is held.

In the spring of 1998, six course syllabi(complete with course description and objectives) were submitted to thestate to obtain permission to grant the endorsement. Also included was agrid identifying each ISTE Standard and the course or courses that covered the standard. The six courses were(obviously) chosen from among the program offerings because they mostclosely were in alignment with the ISTE Standards as specified by thestate. The six courses are:

EDCI 631Survey of Computers in Education (3)
EDCI633 Hypermedia for Educators I (3)
EDCI634 Hypermedia for Educators II (3)
EDCI635 Classroom Technology, Problem Solving, and the Curriculum (3)
EDCI636 Networks for Learning (3)
EDCI632 Classroom Technology Planning in Education (3)

In late spring, 1998, the program receivedconditional approval to grant the endorsement. Conditional approval meansthe program can grant the endorsement but must also file a rejoinder toaddress several areas where the state desired clarification. In mid-October, 1998, the rejoinder was filed and theresponse from the state (full approval, it is hoped) is expected bymid-December, 1998.

The rejoinder took the form, for each of thesix courses, of a course description (the same as the original coursedescription) coupled to a set of revised objectives for the course.Mostly, what was already being done in the course was explicated for sake of clarity, while in some instances new objectiveswere written which aligned with both the ISTE standard under considerationand the original course description. Additionally, an updated grid of ISTEStandards (as supplied by the state) and the course or courses which covered each given standard, wassupplied to the state. (*Please note:* During the presentation we will supply a relevant,current web address for one of the author's (Blanche O'Bannon's) home pagewhere a link will be available to view, from March 1, 1999, through January1, 2000, the full set of course descriptions/objectives and the full ISTE Standards/Course Implementationgrid.) Table 1, below, offers a sample course descriptionand associated objectives.

> EDCI 636 - Networks for Learning(3) - Intensive investigation of and experiences with tools to access, andresources available on, the Internet. Creation of Web pages. Applicationsacross the curriculum. Investigation of relevant issues regarding privacy, censorship, commercialism and proprietary rights.Prerequisite: EDCI 631 - Survey of Computers in Education.
>
> EDCI 636 - Networks for Learning- Objectives:
>
> 1. Understand the current state of resources on theInternet including the World Wide Web, telnet, gopher, file transferprotocol and how these tools are utilized in K - 12 education, as well asprojections for the growth and evolution of this resource.
> 2. Understand the evolving state of audio and videocommunications over the Internet.
> 3. Investigate and use a wide range of resourcesavailable through the Internet including the World Wide Web.
> 4. Observe, and discuss, the use of networks with students in a relevant K-12 setting.

5. After investigating and evaluating relevant web sitesfor use in K-12 education, develop and practice delivering a series ofcollaborative learning experiences to teach diverse student populations touse web sites in one or more content areas.
6. Produce a product for teacher use in an area ofmanagement or preparation for teaching, that makes use of a number ofnetwork resources.
7. Gain HTML skills, and associated design skills, inorder to develop 1) a personal web page and 2) a public web site related toeducation.
8. Understand, conceptually, the specifics of theprocess of linking web sites.
9. Understand and analyze various positions related tonetworks and the following relevant issues: privacy, equity, censorship,commercialism, proprietary rights, and other legal issues.
10. Become familiar with,demonstrate an understanding of, and practice, various methods for teachingabout and integrating electronic networks into the classroom for diversestudent populations.
11. Become familiar with, and demonstrate anunderstanding of, the current literature on the use of electronic networksin the classroom, regarding best practice.
12. Become familiar with, and demonstrate anunderstanding of, the current literature on the use of electronic networksin the classroom, regarding current research on such use.
13. Demonstrate knowledge of communication/research at adistance, and educational collaboration at a distance, through thecollaborative use of e-mail, listservs, automated search tools to locatespecific information, and through awareness of Internet-based/web-based courses.
14. Observe demonstrations/uses of broadcast instructionand audio/visual conferencing.
15. Use devices such as scanners and digital cameras indevelopment of a web page.
16. Demonstrate a knowledge of web-based resources tosupport the use of technology with special needs students.
17. Locate and describe current, relevant softwarepackages used to operate computer network systems.
18. Investigate and evaluate web sites and othernetworked resources regarding lifelong learning and distance educationopportunities.
19. Understand and develop school/lab responsible usepolicies and procedures regarding the use of computers/technology,including the use of local and wide area networks, addressing issuesincluding (among others) ethics, equity, privacy, equipment care and maintenance.

Table 1. A Sample CourseDescription and Objectives

Implementation

With the graduation of the first cohort ofstudentsfrom the program in December of 1998, it is expected that thefirst set of endorsements will be granted in the early spring. In thefuture, students in the program may opt for earning the endorsement within the program, in which case all courses in theprogram except EDCI 637 - Distance Learning, will be required. If studentsopt to forego the endorsement, they will be able to substitute up to 12credits of valid electives in place of the 12 credits of "Suggested," courses identified above. There arecurrently, due to a lack of sufficient hardware/software and personnelresources, no plans to offer the endorsement outside of the Master'sprogram.

Interestingly, SchoolNet, a state programwithin Ohio which has been funded by the legislature for over 500 milliondollars and is charged with supplying equipment, wiring and teachertraining regarding technology to Ohio's schools, has begun offering novice, practitioner and scholar technologycertificates to teachers. Historically, since SchoolNet and the StateDepartment of Education are separate units within the state, there appearsto have been little, if any, coordination between the SchoolNet certificateprogram and the Department of Education endorsement incomputers/technology. Although SchoolNet does not have credentiallingauthority, many individuals are currently working to bring some coordinatedeffort to both the excellent work SchoolNet

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has been doing and the fineinitiatives coming from the State Department of Education. Such a coordinated effort in the area oftechnology and teacher education would only benefit the teachers andstudents of Ohio.

Conclusion

The foresight of the individuals involved inthe ISTE effort to establish technology and teacher education standards atboth the preservice and inservice levels, and in successfully presentingthose standards to NCATE, has been a boon to those involved in technology and teacher education. The design of theprogram referenced here, as well as the adoption by Ohio of the ISTEStandards regarding the Ohio computer/technology endorsement, have nicelydovetailed to serve the teachers within our service area. By doing so, we make good things possible withtechnology to all the groups we serve including teachers, students, and thepopulation at large.

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